here is the use case diagram for the Pothole Tracking and Repair System (PHTRS):

Explanation:

A use case diagram is a type of UML (Unified Modeling Language) diagram that illustrates the interactions between the actors (users) and the system under consideration. It is used to identify and define the different use cases (functionality) of a system and the relationships between them.

The use case diagram consists of three main elements: actors, use cases, and relationships. Actors are the external entities (users, systems, or devices) that interact with the system. Use cases are the actions or services provided by the system to the actors. Relationships are the connections between actors and use cases.

Step 2

Assumptions made in this use case diagram:

Users can access the PHTRS system through a web interface.

Users must log in to report a pothole, update pothole information, and create damage files.

The public works department can view, update, and generate work orders for potholes.

The public works department can view reports on potholes, work orders, and damage files.

The system automatically assigns identifying numbers to potholes.

The system automatically determines the district and repair priority based on the street address and the size of the pothole.

The system automatically calculates the cost of repair based on the hours applied, number of people, material, and equipment used.

Answer

I provided a use case diagram for a web-based pothole tracking and repair system for the department of public works in a large city. The use case diagram includes interactions between the user and the system, as well as interactions between different parts of the system. Assumptions were made regarding the user interface, login requirements, automatic assigning of identifying numbers and repair priorities, and automatic calculation of repair costs. Use case diagrams can be useful in designing and developing software systems.

Here's the Data Flow Diagram:

